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ABSTRACT

Final evaluation of the Workplace Education Program, funded by the National Workplace Literacy Program to provide workplace literacy education programs to 425 members of Chicago (Illinois) area clothing and textile workers union members, is presented. The program's goal was to enhance workers' basic literacy skills for present job stabilization and future job advancement. Additionally, it sought to prepare limited-English-speaking workers for employment in an environment of new technology and increased global competition. Because of the characteristics of the learner population, instructional emphasis was placed on English skills acquisition using contextualized workplace materials, supplemented by workshops on work-related topics. The report begins with an overview of the program and evaluation and highlights of program outcomes, focusing on outcomes for both participants and partner companies. Accomplishment of four specific objectives is then summarized, and summary data on the number and characteristics of program participants (workers and companies) are presented. A separate section details program activities, including classes, participant profiles, information on the four partner companies, participating community-based organizations, and program staff, educational methodology, teacher selection, staff development and teacher evaluation, and learning materials and resource center. The program implementation model and dissemination activities and the evaluation activities are then discussed. (MSE) (Adjunct ERIC Clearinghouse on Literacy Education)

Integrating Literacy and Workplace Skills for Worker Advancement

Worker Education Program Final Report

May 1, 1992 - March 31, 1994

**Presented to :
U.S. Department of Education
National Workplace Literacy Program**

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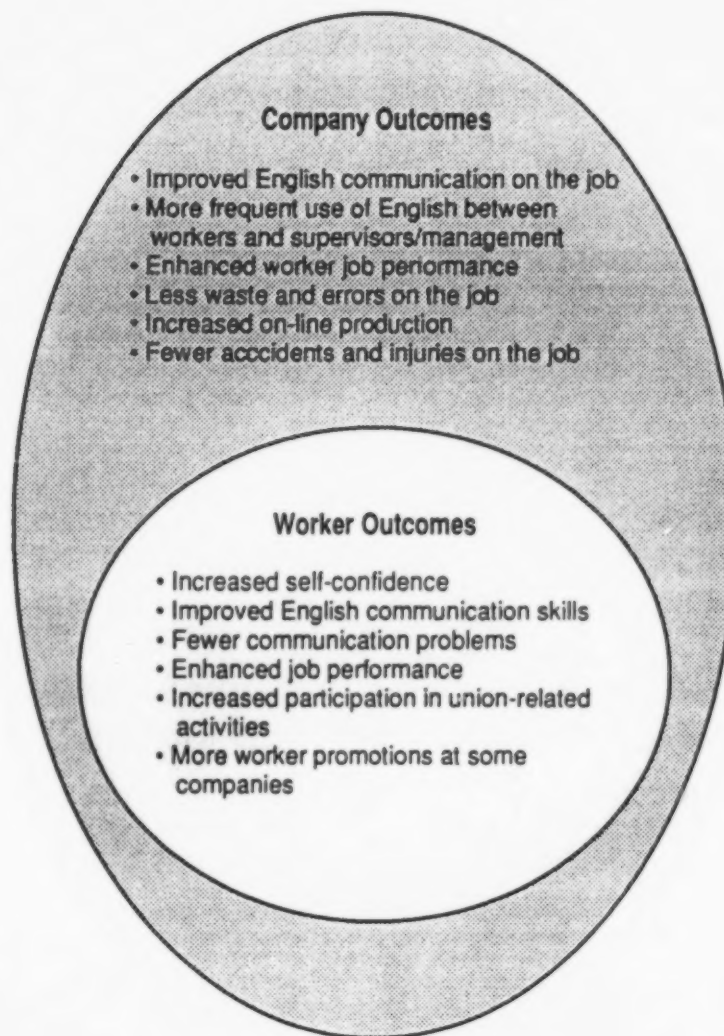
I. INTRODUCTION

This report addresses the final outcomes of the Worker Education Program. The Worker Education Program (WEP) was funded by the National Workplace Literacy Program to provide workplace literacy educational programs to 425 members of the Central States Joint Board of the Amalgamated Clothing and Textile Workers Union (ACTWU) in the Chicagoland area. Along with ACTWU, the program partnered with four manufacturing companies and two community based organizations over the grant period. The purpose of this report is: 1) to demonstrate effective program outcomes through successful completion of originally funded program objectives, 2) to report on the number and characteristics of program participants, 3) to report on program activities, 4) to demonstrate the program implementation model for dissemination to other workplace literacy programs, and 5) to report on evaluation activities.

The goal of the program was to enhance workers' basic literacy skills for present job stabilization and future job advancement. Additionally, the program sought to prepare limited English proficient workers for the challenges of working in an environment of new technology and increased global competition.

Because the majority of the workers in the Worker Education Program were limited English proficient and many functioned at a low literacy level, the principle focus of the program was the provision of English skills acquisition through contextualized workplace materials. In addition, the program offered a series of short workshops which focused on a variety of work-related topics of interest to participants. The WEP established a strong link between skills taught in the classes and the literacy requirements of actual jobs through an innovative, model program which will be detailed in this report.

Two Layers of Program Outcomes



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II. HIGHLIGHTS OF PROGRAM OUTCOMES

Participant Accomplishments

- Provided English as a Second Language for the Workplace for 307 workers from participating companies
- Provided a variety of job-related workshops for 272 workers from participating companies
- Increased participating workers' levels of self-confidence
- Enhanced many workers' on-the-job English vocabulary and general communications skills
- Assisted workers' understanding of safety rules and regulations
- Increased participants' oral English skills an average of 12.3 points on the BEST test
- Increased participants' writing skills an average of 2 points on holistic scale of 1-5
- Enhanced workers opportunities for promotion and advancement in some companies
- Improved Chicago Transparent Products' workers' measurement and math skills

Partner Company Accomplishments

- Enhanced quality control measures in some of the participating companies
- Reduced amount of scrap and waste at some of the participating companies
- Promoted workers from within the company ranks at Juno Lighting (4) and Chicago Transparent Products (3)
- Increased on-line production at some of the participating companies
- Collaborated and exchanged training and educational ideas as part of program Advisory Board meetings

III. ACCOMPLISHMENT OF PROGRAM OBJECTIVES

Objective One

A document will be prepared accessing actual workplace literacy requirements at the target factories, and based on this assessment a comprehensive program plan will be developed and monitored throughout the year by a worker represented Advisory Board and a Worker Education Council.

Program Objective One was successfully accomplished. Task analyses were performed at target factories. Task analyses were used to develop relevant and interactive curriculum for adaptation in program classes. Both the task analysis and curriculum were reviewed periodically at Advisory Board meetings and changes were made in adherence with different company and participants' needs.

The Advisory Board consisted of representatives from the companies, the community based organizations, the union, and the program staff. The Board met formally every other month, made program recommendations, and developed program strategies. Notes of these meetings and attendance records were kept for each meeting. This information is on file at the program office.

The Workers' Education Council was established at the program's inception. At the regularly scheduled meetings, participants from the classes provided feedback and information to the program staff. Workers implemented a recruitment plan and they created program flyers.

Toward the end of the program, attendance at the Workers' Council meetings decreased. Because adult workers have many responsibilities in their lives, it is difficult for them to attend additional meetings after work or on weekends. Due to these schedule conflicts, the program developed informal advisory groups at individual factory sites. These groups have recently begun to meet regularly in order to plan and collaborate on future workplace education projects.

Through discussions with workers and advisory board members, the program developed information for performing task analysis, curricula ideas, and training materials. Workers and Advisory Board members provided suggestions about curriculum, class activities, policy development, transportation reimbursement plans, formation of new classes, and recruitment of co-workers for classes.

Having experimented with two models, the program believes that the second, plant specific model is a superior one with the potential to have a more lasting effect on individuals and individual worksites.

Objective Two

425 Workers will be identified, assessed, and counseled in order to develop an individualized educational plan based on the assessed needs, and be placed in workplace literacy programs

This objective was accomplished on an on-going basis. Identification, recruitment, and retention of program participants occurred continually, and new classes formed on the basis of need and interest at individual ACTWU plants. A total of 307 workers participated in ESL for the Workplace and Pre-GED classes. In addition, 272 workers attended mini-workshops focusing on a number of topics including Health and Safety in the Workplace, Math Skills, Team Building and Problem Solving, the American Work Culture, and Writing/Communication Skills.

Although the program did not serve 425 participants in long-term classes as originally projected, the total number of participants served in all educational offerings exceeds the original number projected. A total of 373 participants registered for the classes; however, 307 participants attended on a regular basis. Barriers preventing participants from attending classes or finishing classes include: family responsibilities, long commutes, car pool schedules, low self-esteem, no work release time, illness, and lack of interest.

In order to address these issues, the program hired an educational recruiter. The program recruiter, a Spanish speaking, retired union member traveled to participating factories and met with workers on a one-to-one basis and in a group format. He created flyers for program recruitment, made regular visits to the factories at lunch time and during breaks, and called workers when they failed to attend classes. Because the recruiter was a former union member, a dynamic speaker, and familiar with the participating factories, he was able to have some impact on attendance in the classes.

The completion of Individual Learning Plans (ILP) was a standardized intake procedure for all students in the classes. The ILP was incorporated into two program forms—the intake form and the progress forms—which facilitators filled out on a monthly basis. These forms listed students' objectives for participating in training and the forms were updated periodically to reflect progress toward students' goals.

Objective Three

250 Limited English proficient workers will have significantly increased their competency in job specific basic skills, literacy and proficiency in English.

This objective was implemented on a continuous basis. A sampling of pre- and post-assessment scores demonstrated that participants significantly increased their basic literacy skills. The average gain on the BEST, a standardized ESL, test was 12.3 points, and workers' English writing skills improved.

The grant proposed to raise workers' basic math skills through the provision of math classes. Only one factory, Chicago Transparent Products, needed workers' to improve their math skills to perform the basic functions of the job. Because workers were unfamiliar with the U.S. system of weights and measures, workers made frequent errors in measuring plastic bags. These errors caused a devastating amount of scrap and the company was losing money with every production line. The WEP designed a short course concentrating on measurement skills and basic math skills -- addition, subtraction, division, multiplication, and percentages for CTP workers. In addition, CTP ESL classes integrated math competencies in the curriculum. Sixteen students completed the Math Workshops, and they were so successful in this endeavor that scrap and waste decreased almost immediately. Math was not offered again during this grant cycle because partner companies and the participating workers felt that the acquisition of ESL skills was a priority.

The program has verified progress toward workers attainment of basic literacy skills in a number of ways. First of all, workers themselves verbally acknowledged that after attendance in the program they understood their job requirements better; they felt that their on-the-job skills improved; and they were more willing to take risks and attempt to communicate in English more often with their bosses and human resource personnel. Secondly, employers advised program staff of improvements in quality control, less errors and waste, increased communication in English on the shop floor, and a sense that workers seemed to feel better about themselves and the company. This information was verbally passed on from management personnel to WEP or ACTWU staff, and it was documented in written form in the Employers Competency Checklist Form.

Roman Adhesives' management reported that before the classes, workers produced 136 gallons of adhesive per man hour, and after attendance in the WEP classes, workers produced 150 gallons in the same time period.

After Chicago Transparent Products workers attended the classes, production of plastic bags went up, there were less errors as workers learned how to measure the bags correctly, and quality control improved as workers understood how to spot defects and report them on the appropriate forms.

After attendance in classes, Juno workers learned the actual names of the machines they worked on in English. Previously, workers made up names for the machines using a combination of English and Spanish words. This informal system of misnaming parts and machines made communicating in English to management personnel almost impossible. It was also very confusing to new workers as the names the workers called parts or machines were non-existent in either English or Spanish.

Due to attendance in the WEP, workers from many of the shops who previously asked co-workers to fill out their work forms for them were able to fill out work forms themselves. Also, workers relied less on co-workers for translation and interpretation to management.

The program used a combination of standardized tests, custom designed work-based tests, and other open-ended measures of learning gains in order to verify progress toward the previously-mentioned objectives. Tests included the following:

BEST Test

At the time of intake, at mid-points, and upon a participants' exit from class, program staff administered the Oral BEST test. The BEST, a well-known ESL instrument, was formulated by the Center for Applied Linguistics. The average BEST score of participants at the start of the program was 8 and their MELT student performance level ranged between 0 to 1. By the program's completion, the average BEST post-test rose to 16.3. The MELT performance level rose to 3. The average gain on the BEST test was 12.3.

Job-Based Customized Tests

Facilitators, program staff, workers, and management of the partner companies assisted in the design of job-related customized tests. These instruments were used as mid-point and post-test measurements in some of the classes. This customized test reflected competencies which were taught in the classes and included work forms, vocabulary, reading and listening comprehension, and some basic math.

Holistic Writing

Upon entry into the program, students provided a holistic writing sample based on a custom-made prompt. Since many students could not write in English, they chose to write in Spanish. A sample of holistic writings demonstrated that workers who initially wrote in Spanish on their pre-writing tests wrote in English on the post-test. On a holistic scale of 1 to 5, the average pre-test score for Spanish test takers was 3. For those who wrote in English, the average pre-test score was 2. Some students could not write in Spanish as they were non-literate in their native language.

After sixteen weeks of classes, the students took a post-test using the same holistic writing prompt. Program data indicated that students who previously wrote in Spanish wrote basic English sentences. The average score after sixteen weeks of classes was still 2. At the end of the grant cycle, the average score rose to 3.5 at an average range gain of 1.5 to 2.0. Since many of the educational facilitators used the Language Experience Approach in classes, many writing samples were used and evaluated during the course of the project. Narratives from the students also demonstrated the impact of the program on the workers' lives and work performance.

Other indicators of student gains include the following:

Progress Reports

Educational facilitators completed progress reports on their students, and they met with students on a regular basis to discuss achievement of job-related, educational, and personal goals. These reports were completed approximately every four weeks.

Student Portfolios

When possible participants' writing samples were compiled and placed in individual portfolios. This way each student's development could be tracked in order to demonstrate progress. Portfolios, by their very nature, demonstrate a series of performance indicators. A student can look through a portfolio and readily see an initial writing sample in which he/she was writing only in Spanish. The student can trace his/her own development as he/she compares the first writing sample with the last in which he/she is writing a full paragraph with correct punctuation and spelling in English. Portfolios capture what standardized test cannot, and they function as further incentives to continue progressing toward individual goals.

Student Anthology

Student writings were anthologized during the program. The anthology served as an incentive to continue writing, and it was used to demonstrate the effectiveness of the program to students, partner companies, and the program funders.

Student Evaluations

At different times throughout the program, students filled out evaluations rating the usefulness of the program for ESL, job advancement, personal and educational purposes. Student feedback was used to make changes in curriculum, materials, staff development, recruitment models, and program methodology. For example, students commented that they wanted a more structured and grammar-based textbook in ESL for the Workplace classes. Plans are presently being implemented to replace *Working in English*, by Contemporary Books with *Day by Day*, by Prentice Hall.

Anecdotal Records

Educational facilitators maintained anecdotal reports documenting individual participant progress throughout the duration of the program. These records recounted

situations in class and on-the-job which served as evidence of accomplishment of program goals.

Simulated Job-Related Tasks

Whenever possible, simulated job related tasks were performed in the classes to gauge the progress of participants. In classes which met at the factories this task was accomplished more easily than it was in classes which met in community based organizations. Nonetheless, whenever simulated job-related tasks were performed in a classroom setting, they were used to demonstrate progress toward improved on-the-job performance.

Attendance Records

Attendance records were maintained for every class session by the educational facilitators. At the end of sixteen weeks, the facilitators submitted these attendance records to administrative staff. In turn, administrative staff contacted participants who were erratic in their class attendance to facilitate their return to class. During the first few weeks of classes, program staff visited the classes to verify attendance. If registered students failed to attend classes, program staff contacted students and encouraged them to return to classes. Attendance records served many purposes in the evaluation process. They indicated who was attending classes, and they provided a plan for continual recruitment and retention.

Objective Four

300 limited English proficient adult workers will have significantly increased their preparedness and continued future employment.

This objective was on-going. Workers increased their preparedness for future employment in a number of ways. Test results showed gains as the direct result of program participation. On an anecdotal level, supervisors commented that workers who regularly attended the classes improved their job skills, demonstrated increased levels of self-esteem and initiative, and communicated in English more frequently to foremen and other supervisory personnel. Some workers were promoted, and others demonstrated more ease and comfort speaking in English to supervisors and non-Spanish speaking co-workers. As the result of the classes, workers understood quality control measures. At one plant workers would not sign their initials on control forms until the job was completed properly. This was a dramatic change as, previously, workers would initial the forms without comprehending the significance of the quality control check.

Worker Promotion

At Juno Lighting, four workers were promoted as the result of the classes. At Chicago Transparent Products, four workers were promoted. According to the CTP Plant Manager, Garry Cox, this ability to promote within company ranks was the direct result of the ESL for the Workplace classes offered to workers at the plant. Previously, CTP had to hire new employees as his existing workforce did not possess the skills necessary to become machine operators.

Participant Case Studies

Esmeralda started ESL classes at CTP with a very low level of ESL proficiency. She was very shy and said that she was happy with her position as a packer. After a few months of classes, however, Esmeralda excelled in the classes. She became the class leader and even helped other students with measuring skills and ESL competencies. After six months in the program, a machine operator position became available, and Esmeralda applied for the position. Esmeralda successfully passed the test, and she was subsequently promoted to the machine operator trainee position.

Alberta was a packer when she started ESL classes at CTP. Her level of English was somewhat higher than the other students in the program, however, she lacked self-esteem. After five weeks in the program, she was promoted to the position of Quality Control Assistant.

Crisóforo was a machine operator trainee when he started classes at CTP. He sought additional tutoring from the teacher in order to prepare for the Machine Operator's test. After 8 months in the class, he successfully took and passed the test. Subsequently, Crisóforo was promoted to a machine operator position.

Garry Cox said that the workers' participation in ESL for the Workplace classes was a decisive factor in determining who would be promoted. He noticed improved English communication skills as well as a far greater understanding of the forms used at CTP in these three workers. He also noticed improvement in their ability to weigh and measure accurately and perform other basic math calculations which were integrated into the ESL class.

Virginia worked at Juno Lighting for 16 years. During this time, she worked on the assembly line. She first heard about the Worker Education Program through contact with

the program coordinators who held meetings and distributed flyers during the lunch break. At first, she was unsure about enrolling in ESL classes because of her commitments at home and to the job. She commuted to her job via a car pool, and she could not stay after work to attend the classes. She finally decided to enroll in the classes at a nearby community based organization site. One reason she decided to take the classes was because child care was offered. Virginia has four children. Without child care services, she just would not have been able to attend ESL classes at all. Virginia attended classes on Saturdays for almost one year. In the class, she learned different words and phrases for use on the job. Recently, she was promoted to a group leader position. In her former position, she did not need to know that much English because most of her co-workers spoke Spanish. However, as a group leader, she needs to speak and understand English to communicate with managers who only speak English and with her Vietnamese co-workers. She felt that her English improved enough to take on the additional challenges as a group leader. Virginia was not able to continue classes after the program switched to service delivery to the factories, but she attended many of the workshops. Virginia credited the Worker Education Program with giving her the confidence she needed to be promoted after 16 years on the job.

Gerardo works in the Receiving Department at Juno. Since taking ESL classes in the Worker Education Program, he became more motivated and he enrolled in the Pre-GED class which took place at Juno after work. Through the program, Gerardo stated that his English improved, his vocabulary developed, and he communicated better with his supervisor. Further, Gerardo stated that he refinanced his mortgage with English speaking finance personnel. He felt more confident. He read the work tickets much better, and his job accuracy rose about 15%. Now, new employees come to him with questions about the job, and he is proud to encourage them to attend the WEP program classes.

In addition, Juno workers Engracia, Cecilio, and Daniel were all promoted after attendance in the classes. These workers were all assembly line workers, and they were promoted to positions in the Label Room and in Shipping and Receiving. These positions require English reading and writing skills. Conrad Medina, the Plant Manager, stated that there was a direct link between attendance in the WEP classes and the workers' enhanced on-the-job competencies and improved English skills. Conrad felt that these workers were really making an effort to improve their basic skills for the job; thus, it was incumbent upon him to promote these workers for their extraordinary effort and enhanced job skills.

Supervisor Checklists

During the program cycle, employers were interviewed and they filled out checklists documenting competencies gained by the workers. This data demonstrated accomplishment of program goals and objectives. Six checklists were sent out to participating plants and five companies returned the checklists. The checklists included questions on indicators of workplace education program quality.

The checklists measured the following work competencies:

Employee Performance	Salary Increases
Safety Improvements	Productivity
English Communication	Job-related Tasks
Promotion	Employee Turnover

The results of the checklists completed by workers' supervisors demonstrates that workers spoke English more frequently on the job. The checklists also showed that job performance and skills improved through workers' participation in the program. The following table illuminates the supervisors' responses on the checklist.

Findings from Supervisors' Checklist of Workers' Competencies

Competencies	% Affirmative Response
5 COMPANIES SAID YES	
English spoken more often to supervisors	100%
Workers self-confidence increased	100%
4 COMPANIES SAID YES	
Workers absenteeism rates decreased	80%
On-line production increased	80%
Errors and waste decreased	80%
Fewer communication problems	80%
Job performance improved	80%
Writing skills improved	80%
3 COMPANIES SAID YES	
Accidents and injuries decreased	60%
Product quality control improved	60%
Computation and measurement improved	60%
Reading and comprehension improved	60%
Teamwork tasks improved	60%
2 COMPANIES SAID YES	
Participants in program promoted	40%
More participation in staff meetings	40%

IV. NUMBERS AND CHARACTERISTICS OF PROGRAM PARTICIPANTS

1.	Proposed target number of participants to be served:	425
2.	Actual number of participants served:	579
3.	Federal Funds Allocated:	\$408,253.00
4.	Federal Funds Used:	\$403,049.36
5.	In-Kind Matching Funds Projected:	\$212,035.00
6.	In-Kind Matching Funds Used:	\$288,248.00
7.	Participants in Long Term Classes:	307
8.	Participants in Short Term Workshops:	272
9.	Long Term Classes Offered:	ESL for the Workplace Pre-GED Classes
10.	Short Term Workshops Offered:	Total # in Workshops
	Math	16
	American Work Culture	70
	Writing/Communications	16
	Team Work/Problem-Solving	91
	Health & Safety	79

11. Partner Companies

<u>Company (* = partner)</u>	<u># Served</u>	<u>Products</u>
*American Guard-It	14	Travel garment bags
*Chicago Transparent Products	48	Plastic bags
Custom Plastics	11	Plastic injected molds
Grand Illusion	12	Tee shirts
Hart Marx	11	Men's suits
*Henri Studio ¹	0	Cement statues

¹ Workers from Henri Studio did not participate in the grant due to Henri's demanding manufacturing schedule and the fact that classes could not be held during work hours. Workers were provided the option of attending classes before or after working hours, but they were unable to participate in the

11. Partner Companies (cont'd)

<u>Company (* = partner)</u>	<u># Served</u>	<u>Products</u>
*Juno Lighting	103	Recessed lighting
Libra	18	Glove cleaning
Oxford Clothes	9	Women's suits
Party Shoes	28	Ballet shoes
Riddell	4	Football helmets
Roman Adhesives	11	Wallpaper adhesives
Sidney Hillman Health Care Centre	22	Health clinic
Xerox	6	Copier Machines
Total # in long term classes	307	

12. Participant Data:

a. Native countries: (in long term classes)

Brazil	1	Hong Kong	1
China	5	Iraq	1
Colombia	4	Korea	1
Ecuador	2	Mexico	237
Ghana	1	Peru	1
Guatemala	11	Poland	7
Haiti	1	Puerto Rico	15
Honduras	1	U.S.	26
		Yugoslavia	2

b. Average years of school in native countries:

Range: 0--17

Average: 8 years

c. Age:

Range: 17 — 72

Average: 34

program due to schedule conflicts. Workers were unable to come in early or to stay late as the majority of the workers lived in Chicago and commuted via a van pool to Henri Studio -- a two hour drive from Chicago during rush hour traffic. Although Henri workers were given the option to take classes on weekends or in the evenings at the ACTWU office, workers did not attend classes.

- d Sex: (in long term classes)
Women — 196
Men — 111
- e Women — 183 (in workshops)
Men — 89
- f. Previous ESL study:
Range: 1 month — 15 years
Number of participants with previous ESL study: 33
- g Tests of Significance
BEST Pre-mean and post-mean gains score were highly significant at .001 level using a paired T test.

Holistic Writing Pre-mean and post-mean gains indicated individual gains at .001 level of significance using a paired T test.

BEST Test

<u>Pre-test mean</u>	<u>SD</u>	<u>Post test mean</u>	<u>SD</u>	<u>Mean gain</u>	<u>N</u>
15.67	8.68	28.58	5.50	12.92	24

Holistic Writing Test

<u>Pre test mean</u>	<u>SD</u>	<u>Post test mean</u>	<u>SD</u>	<u>Mean gain</u>	<u>N</u>
.72	.88	2.64	.69	1.92	25

V. PROGRAM ACTIVITIES

Classes

The program offered ESL for the Workplace, Pre-GED classes, and a wide array of workshops including Health and Safety, Team-Building and Problem Solving On the Job, the American Work Culture, and Writing/Communication Skills.

Long-term classes were initially held at community based organizations in the neighborhoods where workers resided, but attendance declined at these sites and the program offered classes at the individual worksites after working hours. In addition, classes and workshops were held at ACTWU headquarters. The program model of conducting training on-site at the factory after working hours showed better results as classes focused on actual workplace language and skills acquisition.

For the most part, workers attended classes on a voluntary basis. Two companies, Chicago Transparent Products and Sidney Hillman Health Care Centre, paid full release time to workers to attend classes. Chicago Transparent Products workers attended classes on their days off, and Sidney Hillman workers attended classes on a release time basis.

Profile of Participants

As the data indicates, the majority of participants in the Worker Education Program were limited English proficient adults primarily from Mexico and other Latin American countries with an average of eight years of formal education in their native countries. Many participants never attended formal schooling in their native countries, and some were non-literate in their native language. The majority of the workers never completed high school.

Ten percent of the workers had never attended adult education courses prior to attendance in the WEP classes, and the majority who attended classes reported that they dropped out of the ESL programs due to the large class size, lack of individual attention, their inability to read and write in their native language, the lack of adequate support services, and personal problems.

The WEP attempted to eradicate these problems by

- 1) limiting class size to 15 students;
- 2) using teacher aides;
- 3) incorporating Individual Learning Plans;
- 4) providing native language literacy classes;
- 5) offering child care services at the community based sites and the union hall;
- 6) providing transportation stipends to all workers who drove or took public transportation to classes; and
- 7) providing a child care stipend to participants who attended classes after work at the factories.

In order to assist workers with their personal problems, the WEP referred participants to ACTWU's business agents and social service worker, or to the participating community based organizations.

On an anecdotal level, many students reported negative schooling experiences. They felt that they were either "too old" or "not smart enough" to learn. This lack of participants' self-esteem was a factor that the program attempted to deal with through classroom discussion, a learner-centered methodology leading to a sense of program ownership, and a workers' advisory council.

The program offered partial transportation stipends to students who drove or took public transportation to classes. Transportation reimbursement aided many students who were previously deterred from attending ESL classes. Most of the workers were low-salaried assembly line workers with families. Their budgets were restricted to the basics: housing, food, and maintenance of their children. Transportation assistance in any form was welcomed. The workers were primarily assembly line workers earning salaries between \$3.85 and \$12.00 per hour.

Participants reported that the lack of child care services in other educational provider organizations prevented them from previously attending ESL classes. The provision of child care services proved to be an incentive for many participants.

Partner Companies

Along with ACTWU, four companies signed on as partners. These companies were: American Guard-It Manufacturing, Chicago Transparent Products, Henri Studio, and Juno Lighting. Five other companies were named as participating sites on the original grant application: Custom Plastics, Grand Illusion Design, Libra Industries, Leo's Party Shoes, and Riddell.

ACTWU was an active partner assisting Worker Education Program staff in recruiting other companies for collaboration with the program. During the course of the grant, Sidney Hillman Health Care Centre, Roman Adhesives, Xerox, Oxxford Clothing, and Hart Marx Corporation offered their workers WEP education and training opportunities. The additional companies are light manufacturers, clothiers, and, in the case of Sydney Hillman, health care providers. The program provided Sidney Hillman ACTWU workers with a ten-week class on Team Building and Problem Solving On-the-Job.

Community Based Organizations

Other partners involved in the grant were community based organizations — Instituto del Progreso Latino and Universidad Popular. Originally, the classes took place after work in the neighborhoods where the majority of workers lived. Classes were held in these organizations from September 1992 until July 1993. In addition, to providing the WEP with classroom space, childcare services, and materials, the CBOs provided in-kind educational and support services.

Because class attendance at the CBO sites decreased, the program switched to educational service delivery at the individual factory sites where workers were employed. In this way, workers from the same factories were better able to focus on particular literacy and ESL needs at their individual workplaces. When the original model of working with CBOs proved less than successful, the program replaced it with a model which better met participants' and company needs. The model of providing classes on-site at the factories proved to be a superior option as the classes literally came to the workers and provided them with the opportunity to stay after work to develop their basic literacy skills for the job. In addition, this program model allowed facilitators to focus more directly on the workplace as the primary source of lesson materials.

Program Staff

In addition to program director, Margaret Boyter-Escalona, the program employed a program coordinator: Paula Garcia from August 1992 to September 1993, a training coordinator: Susan Keresztes-Nagy, fourteen educational facilitators, and six teacher aides. Program staff had many years of teaching and administrative experience in programs for limited English proficient adults. Most of the staff possess Master's Degrees in Education, English as a Second Language, English, or other related disciplines.

Educational Methodology

Facilitators used an eclectic (Haskel, 1978) ESL methodology from Krashen's Listening Comprehension, to Lado and Finocchiarro's Audiovisual Method, to Asher's Total Physical Response, to the Language Experience Approach. But Central to this eclectic methodology was the student-centered approach (Anore, 1989). In a student-centered approach workers are active agents in the educational process of attaining workplace literacy skills. According to Madsen Gugliemino "for students and teachers to succeed, ESL students must work with materials relevant to their immediate language needs." (1991) For this reason, teachers used the context of the workplace to promote students' language acquisition. Then students applied this language context to the workplace and beyond.

Because the majority of workers needed English skills in all aspects of their lives, the focus in classes was on the transferability of skills. Students needed to know how to articulate body parts, colors, and numbers not only to report accidents on the job, identify a product label, or to calibrate a machine, but to tell the doctor where it hurts, give a child a crayon, or turn on the oven to the appropriate temperature.

In her *Adult ESL Sourcebook*, Madsen Gugliemino recommended the following steps to effective ESL classes:

- 1) A student-teacher relationship based on mutual respect.
- 2) Involvement in the classroom.
- 3) Relevant instruction.
- 4) A climate of teacher warmth and empathy.
- 5) Opportunities for problem-solving and self-directed learning.
- 6) Opportunities for success.
- 7) A comfortable, yet stimulating environment.
- 8) Cultural orientation. (1991)

The WEP program successfully incorporated these steps into the educational methodology and the teacher-training aspects of the program.

The program adopted a learner-centered philosophy focusing on the complex issues confronting limited English proficient workers in the U.S. In the classes and workshops, adult workers reflected on the contextual aspects of their workplaces and personal experiences to assist them in learning how to learn, how to facilitate better communication at the workplace, how to work as a team, and how to build on present skills for future job stability and promotion. Workers also discussed their importance in the production of goods for market distribution and issues in the American work culture including the importance of being on-time for work, appropriate reasons for calling in sick, the particulars of the W-2 form, and reasons for certain health and safety rules. These competencies were ones which were identified both by workers and management at the partner companies. Program classes were successful because they incorporated workers' self-identified ESL and workplace needs into the program on a daily basis. In *Exemplary Practices in ESL Literacy Programs*, Spruck Wrigley attests to the need of focusing on learners' articulated needs:

Successful ESL literacy programs have one thing in common: they have found ways of helping learners to access literacy and use it in ways that are meaningful to them. In focusing on meaning and communication and by allowing grammar and phonics to be used as tools, not as ends in themselves, these programs are leading the way toward a learner-focused teaching for adults who are new to literacy and new to English. (1992)

Teacher Selection

Teacher selection proved to be a difficult task. After some trial and error, the program formulated an exemplary process of selection and training. Although there are many qualified teachers who have taught in a workplace education environment, the program did not find many candidates who taught ESL in a workplace setting. Most prospective candidates were adult educators who taught EFL abroad, ESL in a TOEFL preparation program, or ESL in a local community college. Although very skilled and learned, these teachers often lacked the skills to teach literacy-level ESL learners. Many of these educators also adhered to a grammar methodology which is not effective with students who have no grammar base in their native language. Further, many ESL teachers had no exposure or limited exposure to a factory environment.

Initially, many of the WEP's teachers resisted the workbased curriculum. They refrained from using work forms, vocabulary, and role plays in class. Since this was the essence of the workplace literacy program, the administrative staff reevaluated this resistance and non-compliance. The program found that teachers needed more familiarity with the work environment of their students, so the program initiated factory tours and meetings with plant supervisors when possible. In addition, ACTWU business agents met more frequently with teachers. The program involved teachers in the task analysis process when possible, and educators attended internal and external workplace trainings. Relocating most classes to factory settings also kept educators more focused on the workplace as the major context of ESL classes.

The WEP formulated another innovative practice in the selection of teachers. In its initial interviews with prospective teachers, candidates were asked to teach a sample fifteen minute class to the administrative team. In this way, the WEP staff evaluated whether or not the candidate was able to make the transition from the traditional ESL classroom to ESL for the Workplace in a factory setting. Through the sample lesson, the administrative team was better able to predict a teacher's potential to adapt to a workplace environment. This process demonstrated the teacher's ability to be student-centered, interactive, and use a variety of ESL methodologies. With the addition of the sample lesson in the interview process, the program achieved better results in hiring and retaining the best teachers.

Staff Development and Teacher Evaluation

In order to ensure quality education, facilitators were trained and evaluated by the administrative program staff and by the external evaluator. These evaluations helped the facilitators to improve, develop, and adapt their teaching skills for a workplace literacy program. The training coordinator worked with facilitators on a one-to-one basis to further develop teachers' skills and adapt methodology for ESL for the Workplace instruction.

The program held monthly meetings for facilitators during which facilitators shared materials and ideas for improving teaching techniques. The training coordinator provided in-service training at the meetings. Agendas and notes of these meetings are on file in the program office. Examples of in-service training included seminars on the following topics:

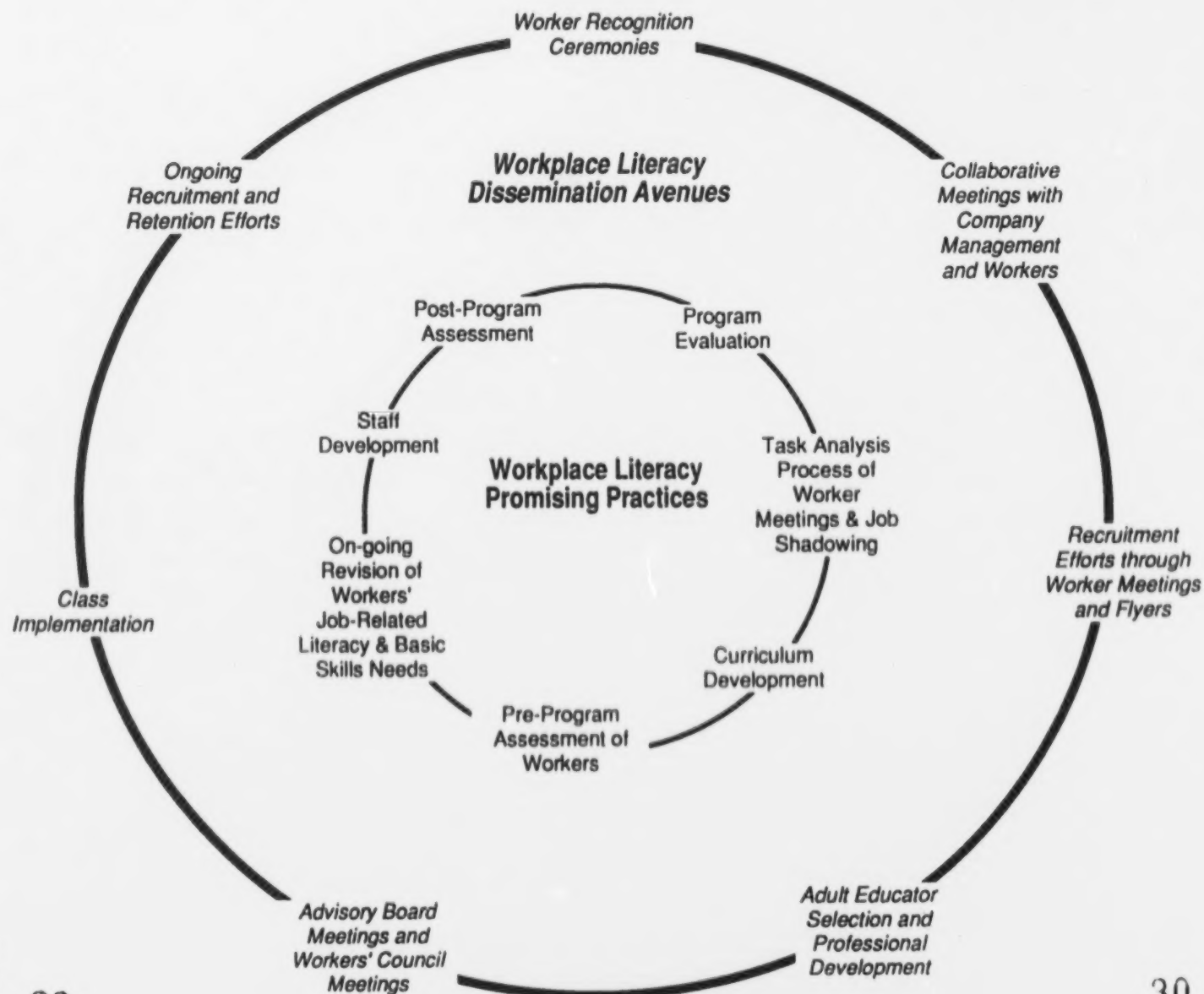
- Adapting Work-Related Materials for the Classroom
- Teaching Literacy Level Students
- ESL Listening Comprehension Activities
- ESL Pronunciation
- Teaching Multi-level Classes
- Reading on the Job
- Math Skills for the Job

Program staff also attended local ESL, Workplace Education, and Adult Education conferences. Facilitators attended interactive educational workshops hosted by the Adult Learning Resource Center. The Coordinators attended regular meetings of the Workplace Education Providers Discussion Group sponsored by the Adult Learning Resource Center, and disseminated information from these sessions to the facilitators. In order to improve their skills and knowledge of the workplace literacy field, administrators and facilitators attended the Illinois TESOL Conference, the Adult Education Service Center of Northern Illinois Conference, and the Illinois Resource Center's Workforce Education Conference.

Learning Materials/Resource Center

A variety of learning materials were used in the program. The curriculum lists supplementary materials and the program purchased books, videos, and audio cassettes in order to augment learners' acquisition of English. The primary text book in most classes was *Working in English*, but some classes changed texts and used *Speaking Up At Work*. Although a higher level ESL text, many classes supplemented or adapted *ESL for Action* for their purposes. Other traditional ESL texts were used on a supplemental basis and teachers customized some of their own materials including graphs, schedules, facsimile work forms, and work-related jazz chants. In addition, some classes used the actual tools and equipment workers used on the job for language acquisition. The program developed a resource center which is housed at the ACTWU office and teachers borrowed materials and books from the resource center on a regular basis.

Program Implementation Model



VI. PROGRAM IMPLEMENTATION MODEL AND DISSEMINATION ACTIVITIES

Program Implementation Model

The Worker Education Program provided members of ACTWU employed in various light manufacturing factories with job-related English as a Second Language and Adult Basic Education skills enhancement through two program models: provision of long-term classes and short-term workshops. Classes were developed after a process incorporating meetings with program partners and participants, needs assessment, task analysis at the jobsites, the creation of exemplary curricula, and the implementation of classes. The graphic on page 25 clearly depicts the program model for establishing workplace literacy classes in the participating companies. Through this process the program established a strong link between skills taught in the classes and literacy requirements of actual jobs.

Planning Meetings with Management and Participants

The first step in implementing the Worker Education Program in companies was to present the program to the management of the companies. Typically, the program director, the business agent, and the educational director of ACTWU met with the human resource development staff person at the company or other appropriate company representative. The purpose of these meetings was to introduce the program to the companies and to begin the collaborative process of providing workplace education training to workers employed in the companies. Company representatives advised the program staff of training needs, problem areas, trends in technology, and industry competition which should be included in curricular offerings.

After meetings with the company management, the next step was to present the program to the workers. In some cases, the program staff first met with union stewards and then the stewards convened meetings with the workers to explain the program, gain support from the workers, and begin an informal needs assessment process focusing on workers' training and educational needs.

This process of involving all stakeholders in the educational planning of the program was instrumental in the success of the program. In order for the program to have an impact on the workers' lives and the profit margins of individual companies, the workers themselves must be consulted from the very start.

Task Analysis

Once management and workers provided input for the implementation of program classes, the task analysis stage began. The task analysis process was conducted by the training coordinator, Susan Keresztes-Nagy, who designed a task analysis sheet which incorporated a list of skills needed to perform jobs in specific factories.

The task analysis process documented the observed skills in speaking, listening, reading, and writing English and observed skills in problem-solving, computing, team-building, and vocabulary of each job of workers involved in the project. In addition, the task analysis included information regarding the clothing, tools, equipment, and machinery needed to perform the specific jobs. The task analysis also focused on health and safety issues as well as problems and mistakes which occurred commonly on the job. This procedure also involved interviewing workers, co-workers, foremen, supervisors, and management. The task analysis process also included questions about new technology, workplace reorganization, and language and literacy skills which are essential to effective job performance. The task analysis process required extensive observation and job shadowing of all workers who could potentially benefit from the educational training.

Curriculum Development

Custom-designed curricula were developed after the task analysis. Since most of the workers had the same ESL needs, the curriculum was divided into thematic units focusing on the following:

- Work Issues: Communications in the Workplace
- Health and Safety
- Quality Control
- Work Forms
- Company Rules
- Vocabulary and Expressions Used on-the-Job

Each unit listed an objective, appropriate language skills, lesson ideas, activities, and materials which could be used to teach the lesson. Each participating factory used the same themes, but the objectives listed under each theme differed. The curriculum materials were

designed for adults to reflect the demands of the workplace and the needs and interests of adult students.

Assessment Process

Upon entry into the program, participants were given a series of appropriate tests. At the time of intake, all program participants articulated their job-related, educational, and personal goals. This information was incorporated into the registration form for each participant. This ILP section of the registration form remained in the participants' files, and it was reviewed when facilitators wrote progress notes on each student. Testing included the administration of the Oral BEST test, and an holistic writing sample.

Class Implementation

Class implementation activities included: retention of program participants, recruitment of new students, adaptation of the curriculum to meet workers' needs, development of lesson plans and materials in a collaborative manner, and formative evaluation. The program was committed to developing the most useful program model through collaborative planning with workers, facilitators, supervisors, and the union. The program model was more successful in plants (CTP, Juno, and SHHCC) where management took an active role in implementing the program.

Participant Recognition

At the end of classes, the program held worker recognition ceremonies. Ceremonies took place at the companies, and workers received certificates of merit for their participation in the classes. In order to recognize workers for their extraordinary effort in attending and making progress in the classes, companies rewarded workers in a variety of ways. All companies provided a special meal for participating workers. In some factories, workers received bonus checks for class attendance. Representatives from the company, ACTWU, and the program were present to award certificates, make congratulatory speeches, and encourage workers to re-enroll in classes. Participating workers made speeches about the classes, and, in some cases, workers presented workplace skits using Workplace ESL scenarios. The recognition ceremonies were instrumental in providing a

mechanism to reward participants for their hard work and effort. They also served as recruitment and retention tools.

Dissemination Activities

Program dissemination activities consisted of conference presentations by worker education program staff and media coverage of the program.

Conference Presentations

For dissemination and promotion purposes the program staff presented workshops focusing on promising practices in the workplace education field at local Adult Education Conferences.

The program director, Margaret Boyter-Escalona, presented a workshop entitled "Creative Alternatives to Evaluating the Effectiveness of Workplace Education Programs" at the 1993 Adult Education Center of Northern Illinois Conference in Rosemont, IL.

Susan Keresztes-Nagy, Paula Garcia, and facilitator, Kathleen Speers, presented "Worker-Centered Educational Programs" at the 1993 Illinois Workforce Education Conference at Roosevelt University in Chicago.

The coordinators' participation in the local meetings of the Workforce Education Providers Discussion Group sponsored by the Adult Learning Resource Center likewise served as a dissemination measure as the coordinators exchanged information with other workplace providers on workplace education issues. The coordinators presented WEP's task analysis and curriculum development ideas to the other members of the group. The group consensus was that WEP materials were exemplary in the field of workplace education.

Media Coverage

Since its inception, the WEP has benefited from extensive coverage. Media coverage included the following:

- Newspaper coverage in *News Star*, "Literacy Classes Come to Workers," by M. Ian Myers on August 5, 1992
- Radio Interview with Margaret Boyter-Escalona and Libby Saries, ACTWU Education Director on *Vantage Point* with David Unumb of WTMX-FM Radio on September 20, 1992.

- Newsletter coverage in *Pro Action*, "Workplace Literacy: NEIU and ACTWU's Innovative Approach," by Barbara Stott in April, 1993.
- Magazine coverage in *The Neighborhood Works*, "Making Room For Basic Skills: Workplace Education," by Julie Johnson in April/May 1993.
- Newsclip and Photograph of participant Gerardo Ayala in *Daily Herald* on July 23, 1993
- Television News coverage on the *America Close-Up* segment of the *NBC Nightly News with Tom Brokaw* on August 5, 1993.
- Magazine coverage in *Technical & Skills Training*, "On Target: Building Up Basic Skills," by Robert L. Reid in February/March, 1994
- Newspaper coverage in *Labor Unity*, "Beyond Workplace Literacy," by Ernesto Mora in March/April, 1994.

VII. EVALUATION ACTIVITIES

External Evaluator

Dr. Joseph Fischer of National-Louis University was contracted as the external evaluator of the program. In order to conduct his evaluation of the program, Dr. Fischer met with program staff on a regular basis, observed classes, interviewed participants, reviewed participant files, and wrote a final external evaluation report.

There were two purposes to Dr. Fischer's role as an external evaluator. He provided the program with both formative and summative evaluation measures. Dr. Fischer's evaluation of the program included quantitative and qualitative features. In order to assess the impact of the program, Dr. Fisher compared pre- and post- standardized tests and conducted open ended interviews to measure the cognitive and affective domains of participants. Dr. Fisher's summative evaluation is included in his final report, and it is based on his role as a formative evaluator. In his role as formative evaluator, Dr. Fischer provided the program with on-going recommendations for meeting program objectives and guidance about impacting the program's targeted population.

Formative Program Evaluation

The WEP conducted its own formative evaluation of the program on an on-going basis. Some measures of quantitative accomplishment of goals include standardized tests, customized work-based tests, holistic writing samples, attendance records, and checklists from partner companies documenting improvements in English communications, safety records, productivity, and enhanced worker performance. Evidence of qualitative evaluation documenting workers' growth and development included student evaluations of the program and progress reports containing individualized learning plans and anecdotal information about participants.

Evaluation of progress toward goals and objectives was performed in a variety of ways on a continual basis. ACTWU staff, Advisory Board members, CTC staff, WEP administrators and teachers, and participants themselves were formally and informally evaluating the program on a daily basis. As a dissemination model program, the WEP demonstrated that it could accomplish funded objectives through a dynamic program which was able to respond to workers basic educational needs.

VIII. CONCLUSION

The Worker Education Program successfully accomplished its originally funded objectives. The program provided basic workplace skills to primarily limited English proficient union members, established an exemplary governance structure, created customized curricula based on task analysis, and significantly increased participants' workplace literacy skills. In addition, workers increased their preparedness for continued and future employment and vastly improved their proficiency in English communication, reading, and writing. Upon completion of the Worker Education Program, union members were better able to face the challenges of working in an English-speaking work environment undergoing changes ranging from the introduction of new technology to shifting global competition.

The Program Implementation Model integrated all stakeholders needs—workers, partner companies, and the union—in a manner consistent with current adult education pedagogy. Through the program's innovative educational service delivery system, workers gained workplace literacy competencies and many were able to experience a "perspective transformation" (Mezirow) which facilitated workplace advancement and personal skills enhancement for a better quality of life. Hence, the program serves as a model for other worker education program which focus on the growing needs of the changing workforce population.